

# IMS Conversion and Migration

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DB-Shuttle™ provides automated technology that protects legacy assets, reduces maintenance costs, provides agility and flexibility, and enables Service-Oriented Architecture (SOA) within business-critical applications.

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The ATERAS conversion includes the generation of a new relational database to replace the functionality and content of any IMS database. The new target relational database can reside on or off the mainframe, and can use any of the standard relational database management systems: Microsoft SQL Server, Oracle or IBM DB2.

The ATERAS solution includes the conversion and migration of the IMS database design and of the IMS data within the databases. The resulting databases are fully relational and native to the target database management system and environment.

## Database Functionality

The ATERAS solution provides a complete replacement for all IMS database functionality:

- IMS record layouts
- Multi-View record types
- Parent and Child relationships
- Group-level elements
- Re-defined data within records
- Occurring data
- Indexes

## Relational Results

The resulting relational database is fully relational. Primary keys, foreign keys and index definitions are automatically created. All constraints are generated into the resulting DDL. Table spaces, indexes, table names and column names are all generated according to your naming standards. The new relational database provides the same business capabilities as the existing IMS database, but also provides full access to the data using standard SQL.

## Delivered Components

As part of the delivery process, ATERAS uses DB-Shuttle to generate and deliver the following component types for installation in the new relational database processing environment:

- Data Definition Language (DDL) Syntax for the new database
- IMS Data Extract programs, generated in COBOL, to unload all IMS data to the correct format for the relational database load utility
- IMS Data Extract JCL, customized to your environment, to execute the extracts and other key-processing utilities
- Load Syntax (optional) for use by relational database load utility
- RI Check Syntax (optional) for use by relational database utility package
- RUNSTATS Syntax (optional) for use by relational database utility package
- DCLGEN syntax (optional) to define COBOL layouts of the tables for replacement applications

## IMS Data Conversion

The IMS data extract and relational load process is simple and straightforward. During the extract process, all IMS data is extracted and written to a set of sequential files that are ready to load to the new relational database target. The IMS data extracts are fast and can be executed simultaneously.

ATERAS can provide a number of extract variations for sites that have special requirements for a short IMS data conversion window. Data conversion during the cut-over weekend or evening is always fast and complete.

## Customization Workbenches

Special workbenches within DB-Shuttle provide additional capabilities for tailoring your IMS migration so that it better meets your needs and requirements:

- Re-name Workbenches to allow full naming of all tables, columns, table spaces and indexes using a rules basis or a full-name basis
- Multi-view workbench processing to allow the specification of multiple data layouts for a single IMS record so that the conversion can include multiple tables to replace the multi-function IMS record
- Data Cleansing Workbench to provide rule-based data cleansing during the IMS data extract process
- Date Conversion Workbench to allow DATE type columns in the new relational databases (all date formats are supported)
- Element Re-name Workbench that allows selection of group-level or elementary IMS fields for use as columns in the relational database
- Record Re-Definition Workbench to allow changes to field types and lengths during the conversion
- Segment workbench where copybook or hard-code record layouts are associated to the IMS database segments

## Visibility and Knowledge-Building

ATERAS ensures that the customer teams (and the ATERAS teams) have a full understanding of the existing IMS database, as well as a full understanding of the post-conversion relational database. DB-Shuttle generates many reports and diagrams to assist with this knowledge-building process:

- Complete Entity Relationship Model (ERM) diagrams for the new relational databases
- Summary reports of the IMS file sizes and usage
- Matrix reports that relate files to tables, fields to columns, IMS records to extract programs, and more
- Date Finder reports that allow team members to define selected fields and columns to ensure that the migration addresses all requirements for date conversion
- Additional ad hoc reports that assist in further detailed identification of the unique characteristics of your IMS database and its conversion

## Related Applications

ATERAS also provides automated conversion of the applications that use the IMS database. Visit our website at [www.ateras.com](http://www.ateras.com) to see how ATERAS converts COBOL, PL/1, Assembler, Easytrieve, JCL and Procs for IMS applications.

